We claim:

1. A method for ascertaining the rotational speed of an internal combustion engine, comprising the steps of:

a) scanning a sector wheel which is driven by the internal combustion engine,

b) detecting a pass of a specific segment of the sector wheel, measuring the duration of this segment pass and ascertaining a rotational speed value therefrom,

c) detecting a pass of a specific part of the segment before and after ascertaining the rotational speed value, and ascertaining a gradient of the duration of the part-segment pass, and

d) associating the rotational speed value with the gradient in order to update the rotational speed value.

2. The method as claimed in Claim 1, wherein a short-time rotational speed value is determined from each pass of the specific part of the segment, and the arithmetic average of the short-time rotational speed values before and after ascertaining the rotational speed value is used as a gradient.

3. The method as claimed in Claim 2, wherein the gradient is additively associated with the rotational speed value.

4. The method as claimed in Claim 1, wherein the part segment comprises between 1/5 and 1/60 of the segment.

5. A method for ascertaining the rotational speed of an internal combustion engine, comprising the steps of:

a) scanning a sector wheel which is driven by the internal combustion engine,

b) measuring the duration of the pass of a specific segment of the sector wheel and evaluating a rotational speed value therefrom,

c) detecting a pass of a specific part of the segment before and after evaluating the rotational speed value, and evaluating a gradient of the duration of the part-segment pass, and

d) associating the rotational speed value with the gradient in order to update the rotational speed value.

6. The method as claimed in Claim 5, wherein a short-time rotational speed value is determined from each pass of the specific part of the segment, and the arithmetic average of the short-time rotational speed values before and after ascertaining the rotational speed value is used as a gradient.

7. The method as claimed in Claim 6, wherein the gradient is additively associated with the rotational speed value.

8. The method as claimed in Claim 5, wherein the part segment comprises between 1/5 and 1/60 of the segment.

9. An arrangement for ascertaining the rotational speed of an internal combustion engine, comprising:

a) a sensor for scanning a sector wheel which is driven by the internal combustion engine,

b) means for detecting a pass of a specific segment of the sector wheel, measuring the duration of this segment pass, and ascertaining a rotational speed value therefrom,

c) means for detecting a pass of a specific part of the segment before and after ascertaining the rotational speed value, and ascertaining a gradient of the duration of the part-segment pass, and

d) means for associating the rotational speed value with the gradient in order to update the rotational speed value.

10. The arrangement as claimed in Claim 9, wherein the means for detecting, measuring and ascertaining are formed by a microprocessor.

11. The arrangement as claimed in Claim 9, wherein the means for detecting and ascertaining are formed by a microprocessor.

12. The arrangement as claimed in Claim 9, wherein the means for associating are formed by a microprocessor.

13. The arrangement as claimed in Claim 9, wherein the means for ascertaining the gradient determine a short-time rotational speed value from each pass of the specific part of the segment, and the arithmetic average of the short-time rotational speed values before and after ascertaining the rotational speed value is used as a gradient.

14. The arrangement as claimed in Claim 13, wherein the gradient is additively associated with the rotational speed value.

15. The arrangement as claimed in Claim 9, wherein the sensor is a Hall sensor.

16. The arrangement as claimed in Claim 9, wherein the specific part of the segment of the sector wheel comprises between 1/5 and 1/60 of the segment.